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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,502	11/21/2003	Takashi Miyakawa	117848	7620

25944 7590 12/04/2006

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ALEXANDRIA, VA 22320

EXAMINER
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EASHOO, MARK

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/717,502

Applicant(s)

MIYAKAWA ET AL.

Examiner

Mark Eashoo, Ph.D.

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 09/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION*****Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asami et al. (US Pat. 4,851,376) in view of JP55-152011A.

Asami et al. teaches the claimed process of forming a honeycomb body, comprising: mixing raw materials and reclaimed materials for forming a honeycomb body (2:48-65 and examples); dried reclaimed unfired /green material crushed into pieces of about 50 mm and less by using fine milling (3:40-65 and 8:10-60); and wherein the reclaimed material is substantially the same as the raw material (2:48-65). Asami et al. further teaches that the reclaimed material may be from "a dried, unfired shaped body or its fragments" (3:40-50 and examples). It is this reclaimed material which is crushed/milled and recycled into the process of Asami et al.

Asami et al. does not teach the mixing of undried reclaimed material with a raw ceramic material. However, JP55-152011A teaches mixing of an reclaimed/returned extruded ceramic material, without drying, with a raw ceramic/pottery material (partial English translation and Fig. 1). JP55-152011A also teaches mixing in a mixer then further shaping by an extruder (Fig. 1). It is noted that Asami et al. suggests that water may be added to a dried reclaimed material in order to reduce the mechanical impact on the particles (8:10-60). Asami et al. and JP55-152011A are combinable because they are from the same field of endeavor, namely, extrusion of ceramic materials. At the time of invention a person of ordinary skill in the art would have found it obvious to have mixed the reclaimed/returned extruded ceramic material, without drying, with a raw ceramic material, as taught by JP55-152011A, in the process of Asami et al., and would have been motivated to do in order to eliminate an undesired process step, namely that of drying (see MPEP § 2144.04, II). It is submitted that the addition of water to a dried reclaimed material is taught to be beneficial Asami et al. and JP55-152011A substantially shows that drying of the reclaimed/returned is not required.

Asami et al. does not teach a specific mixture of reclaimed material to raw materials. Asami et al. does teach that an extruded honeycomb body may be formed by a mixture of reclaimed material to raw materials or wholly of reclaimed materials (2:48-65). Official notice is given that optimizing the relative ratios of reclaimed material to raw materials is well known in the molding art. At the time of invention a person of ordinary skill in the art would have found it obvious to have optimized the relative ratios of reclaimed

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material to raw materials through routine experimentation, as commonly practiced in the art, in the process of Asami et al., and would have been motivated to do so in order to provide an economical and stable product.

Asami et al. does not teach a using a specific order of mixing the reclaimed material to raw materials. Official notice is given that mixing the reclaimed material into to raw materials in a continuous process is well known in the molding art. At the time of invention a person of ordinary skill in the art would have found it obvious to have mixed the reclaimed material into to raw materials in a continuous process, as commonly practiced in the art, in the process of Asami et al., and would have been motivated to do so in order to reuse reclaimed materials without disrupting the normal processing of raw materials.

Asami et al. does not teach a using a specific type of extruder. Official notice is given that use of either a single screw, twin screw extruder, a mixer having a hoe, is well known in the ceramic molding art. Similarly, optimizing the operating speed of a mixer or extruder is also well known in the extrusion art. At the time of invention a person of ordinary skill in the art would have found it obvious to have use of either a single screw or twin screw extruder, a mixer having a hoe, operating at an optimized speed, as commonly practiced in the art, in the process of Asami et al., and would have been motivated to do so in order to sufficient mixing to provide a stable product wherein damage to the material is not caused by excessive mixing shear.

The examiner recognizes that all of the claimed effects and physical properties are not positively stated by the reference(s), for example, the average specific total volume shared by distributed pores. However, the reference(s) teaches all of the claimed ingredients, process steps, and process conditions. Therefore, the claimed effects and physical properties would inherently be achieved by carrying out the disclosed process. If it is applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' position; and (2) it would be the examiner's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects by carrying out only these process steps.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US Pat. 3,631,131 teaches the basic state of the art; US Pat. 5,314,650 teaches recycling an extruded ceramic material that has not been dried (12:5-50).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-10 and 13 have been considered but are moot in view of the new ground(s) of rejection.

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### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

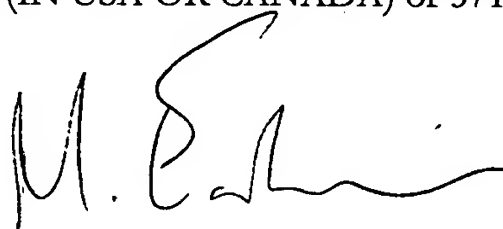
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (571) 272-1197. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Mark Eashoo, Ph.D.  
Primary Examiner  
Art Unit 1732

November 29, 2006  
me

29/Nov/06